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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,109	11/26/2001	Stefan Dyckerhoff	0023.0042	3431

44987 7590 12/13/2006

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EXAMINER

MIRZA, ADNAN M

ART UNIT PAPER NUMBER

2145

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/991,109	DYCKERHOFF ET AL.	
	Examiner	Art Unit	
	Adnan M. Mirza	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-61 are rejected under 35 U.S.C. 102(e) as being unpatentable by Zhang et al (U.S. 6,795,506).

As per claims 1,21,40,48,57 Zhang disclosed a system for processing data received in a plurality of incoming streams of variable speeds, comprising: a memory configured to store data associated with a plurality of incoming streams of variable speeds (col. 29, lines 49-57); an interface controller comprising a first arbitration element to arbitrate among the streams of variable speeds and configured to store the data in the memory using the first arbitration element and a dispatch unit comprising a second arbitration element to arbitrate among the streams of variable speeds and configured to read the data from the memory using the second arbitration element (col. 21, lines 52-67).

3. As per claims 2,22 Zhang disclosed wherein the memory includes: a plurality of memory buckets corresponding to the streams (col. 28, lines 65-67 & col. 29, lines 1-3).

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4. As per claims 3 Zhang disclosed wherein the memory buckets have a fixed size (col. 28, lines 65-67 & col. 29, lines 1-3).

5. As per claims 4,23 Zhang disclosed wherein the first arbitration element is configured to store a plurality of entries, each of the entries including a stream number that identifies one of the streams (col. 21, lines 52-67).

6. As per claims 5,24 Zhang disclosed wherein the number of entries in the first arbitration element for a particular one of the streams is based on a speed of the stream (col. 21, lines 52-67).

7. As per claims 6 Zhang disclosed wherein the interface controller is configured to: read one of the stream numbers from the first arbitration element, providing a list of potential proxy candidates; providing a search mechanism to add more candidates to said list of potential proxy candidates; and receiving a selection of one or more of said potential proxy candidates, including a selection of said first entity (col. 21, lines 52-67).

8. As per claims 7,26 Zhang disclosed wherein the interface controller is further configured to send a stream identifier with the data transferred to the memory (col. 21, lines 45-51).

9. As per claims 8,27 Zhang disclosed wherein the memory is further configured to sort the data from the interface controller based on the stream identifier (col. 21, lines 33-43).

10. As per claims 9,28 Zhang disclosed wherein the first and second arbitration elements are synchronized (col. 19, lines 41-54).

11. As per claims 10,29 Zhang disclosed wherein: the second arbitration element is configured to store a plurality of entries, each of the entries including a stream number that identifies one of the streams (col. 21, lines 52-67).

12. As per claims 11,30 Zhang disclosed wherein the number of entries in the second arbitration element for a particular one of the streams is based on a speed of the stream (col. 21, lines 52-67).

13. As per claims 12,31 Zhang disclosed wherein the dispatch unit is configured to: read one of the stream numbers from the second arbitration element, read data corresponding to the identified stream from the memory, and output the data for processing (col. 21, lines 52-67).

14. As per claims 13,32 Zhang disclosed further comprising: flow control logic configured to initiate flow control on the storing of data in the memory (col. 21, lines 52-67).

15. As per claims 14,36,42,50 Zhang disclosed wherein the flow control includes dropping data from the stream (col. 21, lines 52-67).

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16. As per claims 15,37,43,51 Zhang disclosed wherein the flow control includes causing the interface controller to stop storing data from the stream in the memory (col. 21, lines 45-51).

17. As per claims 16,33,47 Zhang disclosed wherein the flow control logic includes: a buffer configured to temporarily store the data from the interface controller in a plurality of entries, a counter configured to determine a number of entries in the buffer corresponding to each of the streams (col. 29, lines 49-57), and comparator configured to determine whether to initiate the flow control for each of the streams based on the determined number of entries for the stream (col. 21, lines 52-67).

18. As per claims 17,34,41,49 Zhang disclosed wherein the comparator is configured to compare the determined number of entries for a stream to a watermark and initiate the flow control for the stream when the determined number of entries exceeds the watermark (col. 29, lines 49-57).

19. As per claims 18,35,44,52 Zhang disclosed wherein the comparator is further configured to compare the determined number of entries for the stream to a second watermark and drop data from the stream when the determined number of entries exceeds the second watermark (col. 29, lines 49-57).

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20. As per claims 19,38,45 Zhang disclosed wherein each of the streams has an associated watermark for use in performing flow control on the storing of data in the memory (col. 21, lines 45-51).

21. As per claims 20,39,46 Zhang disclosed wherein each of the streams has two associated watermarks for use in performing flow control on the storing of data in the memory (col. 21, lines 45-51).

22. As per claim 25 Zhang disclosed wherein the storing includes: reading one of the stream numbers from the first arbitration element, gathering data corresponding to the identified stream, and transferring the data to the memory (col. 21, lines 52-67).

23. As per claims 55,56 Zhang disclosed a system for performing flow control on data in a plurality of incoming streams of variable speeds, comprising: a buffer configured to temporarily store data from a plurality of streams of variable speeds in a plurality of entries (col. 21, lines 45-51); a counter configured to determine a number of entries in the buffer corresponding to each of the streams (col. 21, lines 45-51); and a comparator configured to: compare the determined number of entries for a stream to first and second watermarks, initiate flow control for the stream when the determined number of entries exceeds the first watermark, and drop data from the stream when the determined number of entries exceeds the second watermark (col. 10, lines 19-32).

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24. As per claims 58,60 Zhang disclosed wherein the first arbitration element is configured to arbitrate among the streams of variable speeds to store the data in the memory based on speeds of the streams and the second arbitration element is configured to arbitrate among the streams of variable speeds to read the data from the memory based on the speeds of the streams (col. 20, lines 40-48).

25. As per claims 59,61 Zhang disclosed wherein at least one of the arbitration element or the second arbitration element is configured to be reprogrammed based on an input regarding a speed of at least one of the streams (col. 28, lines 6-19).

Response to Arguments

Applicant's arguments filed 09/30/2006 have been fully considered but they are not persuasive.

Response to applicant's argument is as follows.

A. Applicant argued that Zhang did not disclose, "An Interface controller comprising a first arbitration element to arbitrate among streams of variable speeds to store the data in a memory".

As to applicant's argument Zhang disclosed, "Such memory orr memories may also be configured to store data streams, data structures or other specific no-program information described herein (col. 29, lines 55-58).

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B. Applicant argued that Zhang did not disclose, “A dispatch unit comprising a second arbitration element to arbitrate among the streams of variable speeds to read data from the memory”.

As to applicant’s argument Zhang disclosed, “the objective of the rate controller is to determine whether to apply more aggressive transcoding and bit rate conversion to a particular compressed bitstream and use the saved bandwidth resulting therefrom for a different compressed bitstream (col. 21, lines 58-62).

Conclusion

26. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Adnan Mirza whose telephone number is (571)-272-3885.

27. The examiner can normally be reached on Monday to Friday during normal business hours. If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Jason Cardone can be reached on (571)-272-3933. The fax for this group is (703)-746-7239. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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28. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866)-217-9197 (toll-free).



Adnan Mirza

Examiner



JASON CARDONE
SUPERVISORY PATENT EXAMINER